



Solid Terrain Modeling, Inc. *Case Study*

Aviation Accident Litigation

Case Summary

A twin-engine light plane lost an engine during a cross-country flight. The pilot made several course corrections and attempted to reach a nearby airport. The plane did not have enough altitude to clear the mountain and the pilot attempted to land in a high meadow near the ridge of the mountain. The plane's wing struck a large rock during landing and the plane caught fire and the pilot was killed.

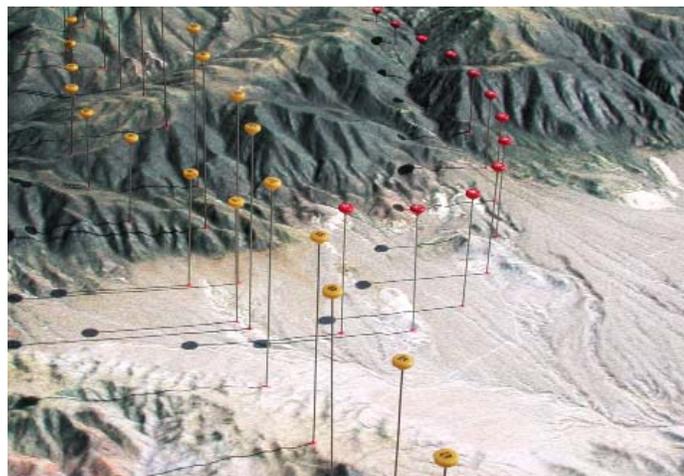
The lawsuit was brought by the family of the pilot and named parties who were involved in the manufacture and maintenance of the airplane.

Project Description

STM was retained by the plaintiff's attorney to make presentation models that would help the jury understand the sequence of events that led to the accident. The factors they wanted to discuss were the plane's position before and after the engine failure, the weather, the terrain, the sequence of the pilot's actions and the direction given by air traffic control.

The transcripts of the conversation between the pilot and the controller in the area were coordinated with the positional information derived by radar. Each 12 seconds a new position was recorded so it was possible to create a flight path from this data.

We proposed two terrain models, one of the mountain range showing the flight path, the mountains and the airport and another model that was a close-up view of the crash site.



The data to create the terrain was gathered from the US Geological Survey archive, the picture of the terrain came from satellite photos and from USGS maps. Numbered rods inserted into the surface depicted the position of the aircraft over time.

The attorney for the defense had an animated "fly-through" created depicting the aircraft's movements. The animation ran for a minute and a half, roughly a real-time sequence from just prior to the failure to the crash. The view in the animation was from just behind the subject aircraft, a "chase plane" view.

During a "mock trial" both sides made their respective presentations, one using the model and the other using the animation. The "mock jurors" later related that the physical model was easier to understand and it allowed them to discuss the issues with each other more easily than the animation.

The case was settled before it went to trial.



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